

**A PROCESS FOR PREPARING AN OLEFINIC HYDROCARBON
MIXTURE**

ABSTRACT

In a process for preparing an olefinic hydrocarbon mixture comprising at least 5% by weight of mono-olefin oligomers of the empirical formula:



where n is greater than or equal to 6, a feedstock comprising n-butene and propylene in a molar ratio of about 1:0.01 to about 1:0.49 is contacted under oligomerization conditions with surface deactivated ZSM-23. The resultant mono-olefin oligomers comprise at least 20 percent by weight of olefins having at least 12 carbon atoms, wherein said olefins having at least 12 carbon atoms have an average of from about 0.8 to about 2.0 C₁-C₃ alkyl branches per carbon chain.